



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
Honeywell Case No. H0004501  
(MBHB Case No. 02-1029-A)

In the application of:

Mats A. Brenner

Serial No.: 10/667,830

Filed: September 22, 2003

For: Radio Frequency Interference Monitor

) Examiner: TBA

) Group Art Unit: TBA

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**TRANSMITTAL LETTER**

1. We are transmitting herewith the attached papers for the above identified patent application:

- Information Disclosure Statement
- Information Disclosure Statement (IDS) PTO-1449 Form
- Copies of IDS Citations for **10/667,830** (Total 22 documents)
- 2 Return Receipt Postcard

2. **GENERAL AUTHORIZATION TO CHARGE OR CREDIT FEES:** Please charge any additional fees or credit overpayment to Deposit Account No. **13-2490**. A duplicate copy of this sheet is enclosed.

3. **CERTIFICATE OF MAILING UNDER 37 CFR § 1.8:** The undersigned hereby certifies that this Transmittal Letter and the papers, as described in paragraph 1 herein-above, are being deposited with the United States Postal Service with sufficient postage as "First Class Mail" in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 19<sup>th</sup> day of December, 2003.

By   
Lisa M. Schoedel  
Registration No. 53,564



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INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to the duty of disclosure provided by 35 C.F.R. § 1.56 and §§ 1.97-98, the Applicants wish to make the following references of record in the above-identified application. Copies of the non-patent references are enclosed. The references are also listed in the PTO-1449 form enclosed herewith. It is requested that the documents be given careful consideration and that they be cited of record in the prosecution history of the present application so that they will appear on the face of the patent issuing from the present application.

Portions of the references may be material to the examination of the pending claims,

however no such admission is intended. 37 C.F.R. 1.97 (h). The references have not been reviewed in sufficient detail to make any other representation and, in particular, no representation is intended as to the relative importance of any portion of the references. This Statement is not a representation that the cited references have effective dates early enough to be "prior art" within the meaning of 35 U.S.C. sections 102 or 103, nor is this submission to be construed as a representation that a search has been made.

### **CITED REFERENCES**

#### **U.S. PATENT DOCUMENTS**

	Number	Date	Name	Filing Date
1.	6,313,789	11/06/01	Zhodzishsky et al.	06/10/99
2.	6,407,699	06/18/02	Yang	04/14/00
3.	6,219,373	04/17/01	Lee et al.	06/15/98
4.	6,295,024	09/25/01	King et al.	02/19/99
5.	6,121,923	09/19/00	King	02/19/99

#### **OTHER DOCUMENTS (author, title, publication, etc....)**

6. "Category I Local Area Augmentation System Ground Facility", Specification FAA-E-2937 A; United States Department of Transportation Federal Aviation Administration, April 17, 2002.
7. Ward, Phillip, "Effects of RF Interference On GPS Satellite Signal Receiver Tracking," Understanding GPS Principles and Applications, Chapter 6, pp 209-236, 1996.
8. Jakab, A., "An Approach to GPS Satellite Failure Detection," NovAtel Inc.

9. Hartman, Randy, "LAAS Government Industry Partnership (GIP)," Honeywell International Inc.
10. Hartman, Randy, "Precision Approach Using Differential GPS," Honeywell International Inc.
11. Ray, J.K., et al., "Characterization of GPS Carrier Phase Multipath," Department of Geomatics Engineering, University of Calgary, Alberta, Canada, ION NTM-99, San Diego, January 25-27, 1999.
12. Maurer, M. et al., "Advanced Receiver Technology For Existing and Future Satellite Navigation Systems," International Journal of Satellite Communications, 2000; 18: pgs 347-364.
13. Upadhyay, Triveni et al., "Test Results on Mitigation of SATCOM-Induced Interference to GPS Operation," <http://www1.faa.gov/and/and300/datalink/dlsys/satcom.htm>, printed 2/4/03.
14. "About the Radio Frequency Interference Monitoring System (RFIMS)," Institute For Telecommunications Sciences, <http://www.its.blrdoc.gov/home/programs/rfims/rfims.html>, printed May, 2003.
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16. Saarnisaari, Harri, "Phase Interference Extractor Interference Canceller In DS/SS Code Synchronization," [http://www.cwc.oulu.fi/home/projects/AWICS/awics\\_pub/2000/harri\\_saarnisaari\\_eu\\_rockom00.pdf](http://www.cwc.oulu.fi/home/projects/AWICS/awics_pub/2000/harri_saarnisaari_eu_rockom00.pdf), printed 3/17/03.
17. Landry, Rene Jr. et al., "Analysis of Potential Interference Sources and Assessment of Present Solutions For GPS/GNSS Receivers," 4<sup>th</sup> Saint-Petersburg on INS, May 26-28, 1997.
18. Ali-Ahmad, Walid, Ph.D., "RF System Issues Related to CDMA Receiver Specifications," RF Standards, September 1999.
19. "Adaptive Interference Cancellation : The Latest Weapon Against Interference," <http://www.cyberrf.com/appnote/canc/cancAppnote2.htm>, printed February 4, 2003, pgs 1- 5.
20. Butsch, Felix, "Innovation: A Growing Concern Radiofrequency Interference and GPS," GPS World, October 2002.

21. Macabiau, Christophe et al., "Use of MultiCorrelator Techniques For Interference Detection," [http://www.recherche.enac.fr/ltst/papers/ion\\_ntm\\_2001\\_interf.pdf](http://www.recherche.enac.fr/ltst/papers/ion_ntm_2001_interf.pdf), printed 3/17/03.
22. Bastide, Frederic et al., "GPS Interference Detection and Identification Using Multicorrelator Receivers," [http://www.recherche.enac.fr/ext/ltst/papers/ion\\_gps\\_01.pdf](http://www.recherche.enac.fr/ext/ltst/papers/ion_gps_01.pdf), printed on 3/10/03.
23. Maenpa, Jon E. et al., "New Interference Rejection Technology From Leica," Leica Geosystems Inc., September 1997.
24. Ober, P.B. et al., "The Suitability of GPS For Basic Area Navigation," 10<sup>th</sup> International Technical Meeting of the Satellite Division of the Institute of Navigation, ION GPS-97, September 16-19, 1997.
25. Volpe, John A., "Vulnerability Assessment of the Transportation Infrastructure Relying On the Global Positioning System," Final Report, U.S. Department of Transportation, August 29, 2001.
26. Gromov, Konstantin, "GIDL: Generalized Interference Detection and Localization System," Dissertation submitted to the Department of Aeronautics and Astronautics and the Committee on Graduate Studies of Stanford University in partial fulfillment of the requirements for the degree of Doctor of Philosophy, March 2002.
27. Phlets, Robert Eric, "Multicorrelator Techniques For Robust Mitigation of Threats to GPS Signal Quality," A dissertation submitted to the department of mechanical engineering and the committee of graduate studies of Stanford University in partial fulfillment of the requirements for the degree of Doctor of Philosophy, June 2001.

Respectfully submitted,

**McDonnell Boehnen Hulbert & Berghoff**

Date: December 19, 2003

By:

  
**Lisa M. Schoedel**  
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FORM PTO-1449 (Rev. 2-32)	U. S. Department of Commerce Patent and Trademark Office	Atty. Docket No. H0004501	Serial No. 10/667,830
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>		<b>Applicant:</b> Mats A. Brenner.	
(Use several Sheets is Necessary)		<b>Filing Date:</b> September 22, 2003	<b>Group:</b>

**U. S. PATENT DOCUMENTS**

Examiner Initials	No.	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	1.	6,313,789	11/06/2001	Zhodzishsky et al.			06/10/99
	2	6,407,699	06/18/2002	Yang			04/14/00
	3.	6,219,373	04/17/2001	Lee et al.			06/15/98
	4.	6,295,024	09/25/2001	King et al.			02/19/99
	5.	6,121,923	09/19/2000	King			02/19/99

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).**

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	6.	"Category I Local Area Augmentation System Ground Facility", Specification FAA-E- 2937 A; United States Department of Transportation Federal Aviation Administration, April 17, 2002.
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	9.	Hartman, Randy, "LAAS Government Industry Partnership (GIP)," Honeywell International Inc.

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	10.	Hartman, Randy, "Precision Approach Using Differential GPS," Honeywell International Inc.
O P E DEC 24 2003 PATENT & TRADEMARK OFFICE	11.	Ray, J.K., et al., "Characterization of GPS Carrier Phase Multipath," Department of Geomatics Engineering, university of Calgary, Alberta, Canada, ION NTM-99, San Diego, January 25-27, 1999.
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	14.	"About the Radio Frequency Interference Monitoring System (RFIMS)," Institute For Telecommunications Sciences, <a href="http://www.its.bldrdoc.gov/home/programs/rfims/rfims.html">http://www.its.bldrdoc.gov/home/programs/rfims/rfims.html</a> , printed May 2003.
	15.	Legrand, Fabrice et al., "Real-Time Minimization of the Total Tracking Error In Phase and Delay Lock Loops – A Second Approach of the Fast Adaptive Bandwidth Algorithm," <a href="http://www.recherche.enac.fr/ltst/papers/ion_am_01.pdf">http://www.recherche.enac.fr/ltst/papers/ion_am_01.pdf</a> , printed May, 2003.
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EXAMINER	DATE CONSIDERED
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformation and not considered. Include copy of this form with next communication.